

WHO recommendations on **home-based records** for maternal, newborn and child health



WHO Departments of:

Maternal, Newborn, Child and
Adolescent Health (MCA)

Immunization, Vaccines and
Biologicals (IVB)

Reproductive Health and
Research (RHR)



**World Health
Organization**

Outline

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1. Introduction

A home-based record is...

- ✓ a record of an individual's health status and their history of health services received (primarily MNCH), including:
 - health, growth and development status
 - visits to a health care provider
 - vaccinations received.
- ✓ kept in the household by the client (e.g. a woman holds a maternal health record) or by the caregiver (e.g. the parent/guardian holds the infant's health record).



There are many different types of home-based records

- Antenatal notes
- Vaccination-only cards/booklets
- Vaccination-plus cards/booklets
- Child health books
- Integrated maternal and child (MCH) health books



Clockwise from top/middle: Colombia circa 2014;
Senegal circa 2014;
India (Orissa) circa 2013;
Saudi Arabia circa 2014
Source: <https://www.technet-21.org/en/topics/home-base-records>

Significance and usage of home-based records

Home-based records...

- ✓ have been widely implemented for decades and they are currently in use in at least 163 countries.
- ✓ vary greatly across countries and regions, in their design and content.
- ✓ are held by nearly everyone in some countries, while usage is very patchy in others.
- ✓ are intended to be integrated into the health information system and to complement records maintained in health facilities.
- ✓ support the right to access to information.
- ✓ are in line with global efforts for people-centred care, which WHO embraces.

Potential benefits of home-based records

For health care providers and for service delivery, the potential benefits of home-based records include:

- access to important MNCH data
- better risk detection and prompt referral
- improved communications with clients
- strengthened links among different health workers and services
- routine health information reporting, monitoring and planning.



Potential benefits of home-based records (continued)

For clients and caregivers, home-based records can:

- facilitate learning and awareness of health problems
- promote detection of risks and timely action
- encourage positive health behaviours at home and continuity of care
- support the right to access to information and enable informed choices.



Rationale and objectives of the guideline on home-based records for MNCH

- ❑ Despite wide implementation for decades, the evidence of the benefits and harms of home-based records for MNCH had not previously been systematically reviewed and summarized.
- ❑ The guideline seeks to address this gap by reviewing the evidence of the effects of home-based records on MNCH outcomes and health service delivery outcomes.

Objective: To provide updated, evidence-based recommendations on the use of home-based records for MNCH outcomes



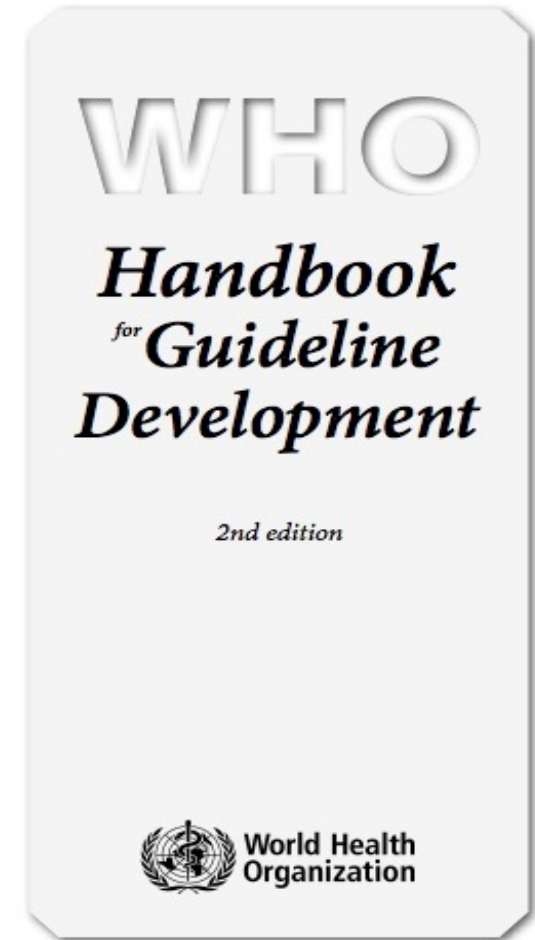
Target audience and intended usage of the guideline and recommendations

- ❑ The findings and the recommendations will enable country-level **decision-makers** and **health care providers** to better understand:
 - the value of home-based records
 - their impact on a broad set of outcomes
 - their potential contribution to strengthening the quality of health service delivery and health systems.
- ❑ The guideline is intended to be used by **policy-makers** and **programme managers** to help them decide whether home-based records should feature more prominently in MNCH programmes, and to encourage more effective implementation.

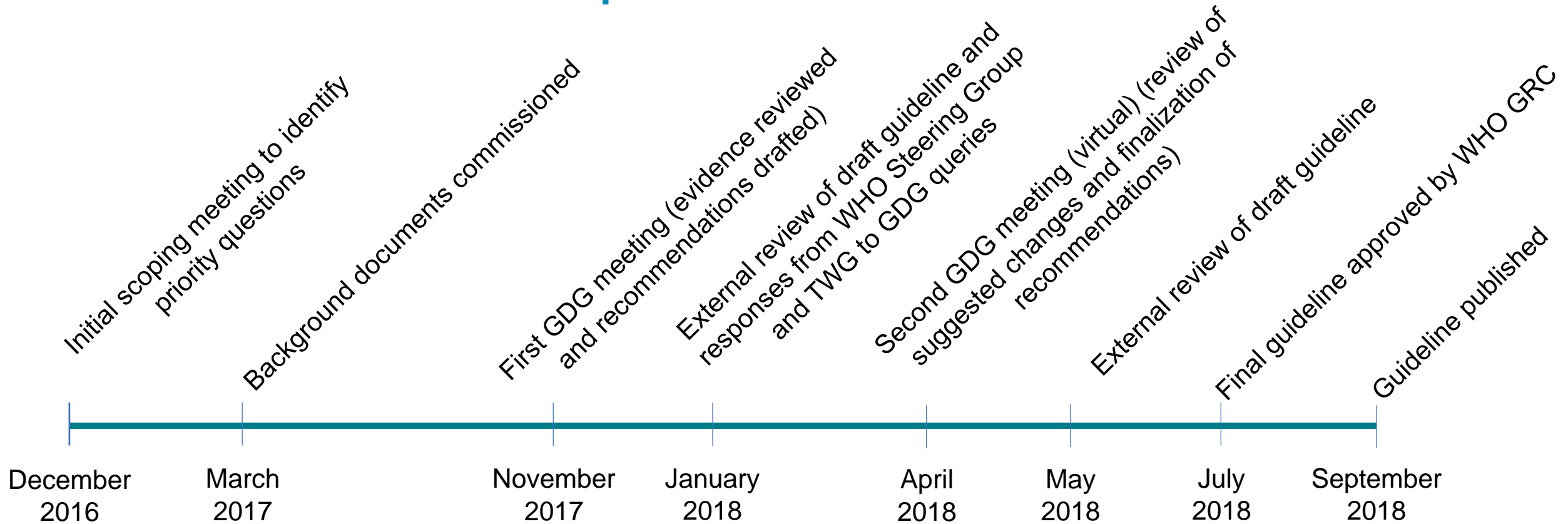


2. Guideline development methods

- Development of a guideline proposal for the WHO Guidelines Review Committee
- Formation of technical groups
- Declarations of interests
- Identification of priority questions and outcomes
- Retrieval and synthesis of evidence
- Grading of the quality of the evidence
- Formulating the recommendations
- Planning for dissemination, implementation, evaluation and updating of the guideline



Guideline development timeline



GDG: Guideline Development Group

GRC: Guidelines Review Committee

TWG: Technical Working Group

Technical groups and external experts

WHO Steering Group – WHO internal experts responsible for overseeing the guideline development process.

Guideline Development Group (GDG) – Twelve external experts and stakeholders, drawn from the six WHO regions, reviewed the evidence, drafted the recommendations and approved the final guideline.

Technical Working Group (TWG) – Teams responsible for the background documents commissioned to respond to the priority questions, as well as two methodologists to advise WHO.

External reviewers – Before the guideline was finalized, three external reviewers undertook a peer review of the draft guideline, checking it for accuracy, clarity, specificity and feasibility.

External partners and observers – Representatives of:

United Nations Population Fund (UNFPA)

United Nations Children's Fund (UNICEF)

United Nations Relief and Works Agency (UNRWA)

Japan International Cooperation Agency (JICA).



Priority guideline questions and outcomes

Six priority questions were identified, specifying Population, Intervention(s), Comparators and Outcomes (PICO)

The priority questions asked whether,
for women during pregnancy and after birth, and for newborns, children and caregivers (P),
the use of any home-based records (I),
compared to no use or inconsistent/low use or compared to different types of home-based records (C),
improved MNCH outcomes and health service outcomes (O)?

The priority outcomes included:

- Maternal: care-seeking, self-care practices, mortality and morbidity, vaccination uptake
- Newborn: care-seeking, caregiver practices, mortality and morbidity, vaccination uptake
- Child: care-seeking, caregiver practices, mortality and morbidity, vaccination uptake
- Quality of care (including health care provider performance, communication between women/caregivers and health care providers, satisfaction with services, and continuity of care).

The full PICO questions and list of outcomes for each are provided in Annex 1 of the guideline document.

Retrieval and synthesis of evidence

Systematic reviews, a cost-effectiveness review and cost exercise, and a framework analysis were prepared:

- Systematic review to identify (a) the evidence of the effect of home-based records on the priority outcomes (13 controlled trials reviewed), and (b) the evidence of cost-effectiveness (no studies found).

Magwood O, Kpadé V, Thavorn K, Oliver S, Mayhew AD, Pottie K (2019) Effectiveness of home-based records on maternal, newborn and child health outcomes: A systematic review and meta-analysis. PLoS ONE 14(1): e0209278. <https://doi.org/10.1371/journal.pone.0209278>.

- Systematic review of qualitative evidence to summarize evidence on women's, caregivers' and providers' experiences with home-based records (18 qualitative studies reviewed).

Magwood O, Kpadé V, Afza R, Oraka C, McWhirter J, Oliver S, et al. (2018) Understanding women's, caregivers', and providers' experiences with home-based records: A systematic review of qualitative studies. PLoS ONE 13(10): e0204966. <https://doi.org/10.1371/journal.pone.0204966>.

- Cost-exercise conducted based on average costs for Burundi, Indonesia and Viet Nam (data provided by JICA).

Thavron K. Cost exercise on home-based records for maternal, newborn and child health. 2018 (available from WHO/MCA: mncan@who.int).

- Framework analysis to provide information on barriers and facilitators to implementation (18 studies in the grey literature on the implementation of home-based records and 12 key informant interviews).

Broaddus E, Mahadevan S, Vogel J. Framework analysis of the facilitators and barriers to the appropriate use of home-based records. 2018 (available from WHO/MCA: mncan@who.int).

Grading of the quality of the evidence

GRADE

The Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach was used to rate the quality (i.e. the certainty) of the quantitative evidence on effectiveness of the intervention with regard to each outcome of interest.

GRADE tables were compiled for each priority question and for each main outcome; high, moderate, low or very low certainty was assigned to each outcome.

(The GRADE tables are presented on pp.1–20 of Web annex A of the guideline.)

GRADE-CERQual

The GRADE-CERQual tool (Confidence in the Evidence from Reviews of Qualitative Research) was used to rate the quality (i.e. the confidence) of the qualitative evidence on users' experiences with home-based records.

A CERQual table was compiled for the key qualitative findings; high, moderate, low or very low confidence level was assigned to each key finding.

(The CERQual table is presented on pp.21–22 of Web annex A of the guideline.)

Evidence to decision (EtD) framework – a summary of the GDG judgements on selected criteria

The following criteria
are addressed in the
EtD framework:

- Effects (desirable & undesirable)
 - Values
- Resources required
- Cost-effectiveness
 - Equity
- Acceptability
- Feasibility



The GDG must make a
judgement for each EtD
criterion, based on their
consideration of the
findings of the
background documents
(systematic reviews,
cost exercise and
framework analysis on
implementation)



The final EtD
framework, where the
GDG judgements are
summarized, is then
used as input for the
GDG to decide on the
recommendations

Evidence to decision (EtD) framework

Criterion	GDG judgement
Effects: Desirable effects	
Q1. Use of any home-based records versus no use (MNCH):	
- Maternal health	SMALL DESIRABLE EFFECT
- Newborn health	DON'T KNOW
- Child health	SMALL DESIRABLE EFFECT
- Care-seeking across MNCH	SMALL DESIRABLE EFFECT
Q2. Use of home-based records versus low-intensity use (MNCH)	DON'T KNOW
Q3. Use of different types of home-based record (MNCH):	
- Maternal health	SMALL DESIRABLE EFFECT
- Newborn health	TRIVIAL DESIRABLE EFFECT
- Child health	SMALL DESIRABLE EFFECT
- Care-seeking across MNCH	DON'T KNOW
Q4. Use of any home-based records versus no use on health service outcomes	SMALL DESIRABLE EFFECT
Q5. Use of home-based records versus low-intensity use on health service outcomes	DON'T KNOW
Q6. Use of different types of home-based record on health service outcomes	SMALL DESIRABLE EFFECT

Evidence to decision (EtD) framework (continued)

Criterion	GDG judgement
Effects: Undesirable effects	DON'T KNOW
Certainty of evidence of effects	LOW
Values	PROBABLY NO IMPORTANT UNCERTAINTY OR VARIABILITY
Balance of effects	FAVOURS USE OF HOME-BASED RECORDS
Acceptability	PROBABLY YES
Resources required	VARIES
Certainty of evidence of required resources	NO INCLUDED STUDIES
Cost-effectiveness	DON'T KNOW
Equity	DON'T KNOW
Feasibility	YES

3. Recommendations on home-based records for MNCH

Recommendation 1

The use of home-based records, as a complement to facility-based records, is recommended for the care of pregnant women, mothers, newborns and children, to improve:

- care-seeking behaviours,
- male involvement and support in the household,
- maternal and child home care practices,
- infant and child feeding, and
- communication between health providers and women/caregivers.

(Low-certainty evidence)



Recommendations on home-based records for MNCH

Recommendation 2

There was insufficient evidence available to determine if any specific type, format or design of home-based records is more effective. Policy-makers should involve stakeholders to discuss the important considerations with respect to type, content and implementation of home-based records.



Rationale of the GDG in formulating the recommendations

Overall, the certainty of the evidence on the effectiveness of home-based records was low.

The limitations of the existing evidence base include:

- Few studies were found.
- Half of the studies were conducted in high-income countries.
- Some of the studies were conducted before 2000.
- There is wide variation in the studies (i.e. different types of home-based records and different outcomes are assessed).

GDG rationale and remarks (continued)

□ The impact of home-based records varied by outcome:

- For many outcomes, no significant effects were reported, or no studies were found.
- Some studies showed positive effects on the following outcomes:
 - maternal health immunization care-seeking
 - outcomes related to a supportive home environment for MNCH care
 - infant feeding and other child health care practices
 - child growth and development
 - continuity of care across MNCH
 - communication with health care providers.

GDG rationale and remarks (continued)

- ❑ The desirable effects outweigh any undesirable effects.
- ❑ Qualitative evidence reports that women, caregivers and providers from a variety of settings value different forms of home-based records.
- ❑ In remote and fragile settings, where health systems are weak or where health information systems are absent or poor, and in locations where caregivers may use multiple health facilities, home-based records may be of greater value than in more developed settings and health systems.

4. Implementation considerations

- ❑ These considerations deal with the content and design of home-based records, integration into health services and systems, costs, and addressing the needs of health workers, women and caregivers.
- ❑ The GDG emphasized that every stage of the implementation process – from design to the training of providers, to utilization by end-users – should be planned and funded, as each stage can affect the home-based record's potential impact on outcomes. These considerations apply to national and subnational levels.



Key implementation considerations

- Careful consideration should be given as to what personal information is necessary to include in home-based records, to avoid stigma and discrimination. Privacy needs to be considered, especially in the case of electronic home-based records, in relation to potentially sensitive information that clients may wish to keep confidential, e.g. HIV testing, status or treatment.
- The design and content of home-based records need to be adapted for appropriate use in local contexts, considering health priorities, available services and language; health workers need training to ensure effective documentation and use of the information.
- Sustainable financing and lower prices need to be secured for all of the costs of home-based records, including durable paper and printing services.

Additional implementation considerations

- Countries should plan to involve all key stakeholders from the outset.
- Strong government ownership and leadership – including planning, integration and budgeting – are key to the prioritization and sustainability of home-based records.
- For countries with multipurpose home-based records, planners must ensure content is harmonized for continuity of care.
- Where literacy levels are low, home-based record designers should consider including more images and less text.
- Regular redesigns of home-based records (involving collaboration of all relevant health areas/stakeholders) are important for keeping health information up to date.
- Careful consideration and adherence to home-based record redesign timelines are needed, to avoid delays and stock-outs.
- Health-system planners should ensure a continuous supply and availability of updated home-based records.
- Distribution of home-based records can be done efficiently through existing health system supply chains and structures.
- Health workers are vital in ensuring the success of home-based records; they will require initial and refresher training and supervision to emphasize appropriate use (including legible handwriting).
- Relying solely on home-based records to provide health education messages and information may not improve care practices and care-seeking; comprehensive health promotion strategies are needed, wherein home-based records can be one component.
- While responsible advertising can bring valuable revenues, advertising on home-based records may present potential conflicts of interests and may have the potential to cause harm, e.g. advertisements for formula milk or political parties; a country programme should carefully assess the risks and benefits.

5. Research gaps

Research is needed on:

- the impact of home-based records on MNCH and health service outcomes (i.e. better/higher-certainty evidence is needed).
- defining the key intervention components and harmonizing key outcome measurements.
- effects of home-based records on provider behaviour and health service performance.
- use of home-based records on single vs multiple aspects of MNCH care, vs those that are also designed for health education purposes.
- electronic home-based records, and how they may complement paper records.
- cost-effectiveness of home-based records; costs of designing and developing them and training health workers in their use; ongoing costs; who is responsible for each cost; sustainability of funding.
- potential harms of home-based records; sensitivity of the recorded information.

(continued on next slide)



Research gaps (continued)

- use and impact of home-based records, from analysis of existing data sources (e.g. longitudinal studies and household surveys).
- how best to conduct ongoing assessment of coverage and impact, to improve implementation.
- use of home-based records in adolescent populations (e.g. for screening and health promotion).
- different methods of linking home-based records to formal health information systems; how this would work; what the impact would be.
- impacts of home-based records on equity across subpopulations.
- how home-based records could impact cognitive development, early childhood development or other child development outcomes.
- how best to design home-based records that capture the necessary information for usefulness and ease of use (implementation research).
- whether home-based records should be distributed for free or at a small cost to the mother or caregiver.
- use of incentive schemes (financial/non-financial) to influence behaviour around availability, retention, appropriate use of home-based records.



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The guideline document is available at:
http://www.who.int/maternal_child_adolescent/documents/home-based-records-guidelines/



IMMUNIZATION PASSPORT

carnet de santé

pregnancy case notes

child health and development passport

MATERNAL AND CHILD HEALTH BOOK

CARTÃO DE SAÚDE INFANTILE

cartillas nacionales de salud

road to health booklet

family health book

CHILD HEALTH RECORD

carte de vaccination

infant immunization card

BABY BOOK

CHILD HEALTH PROFILE BOOK